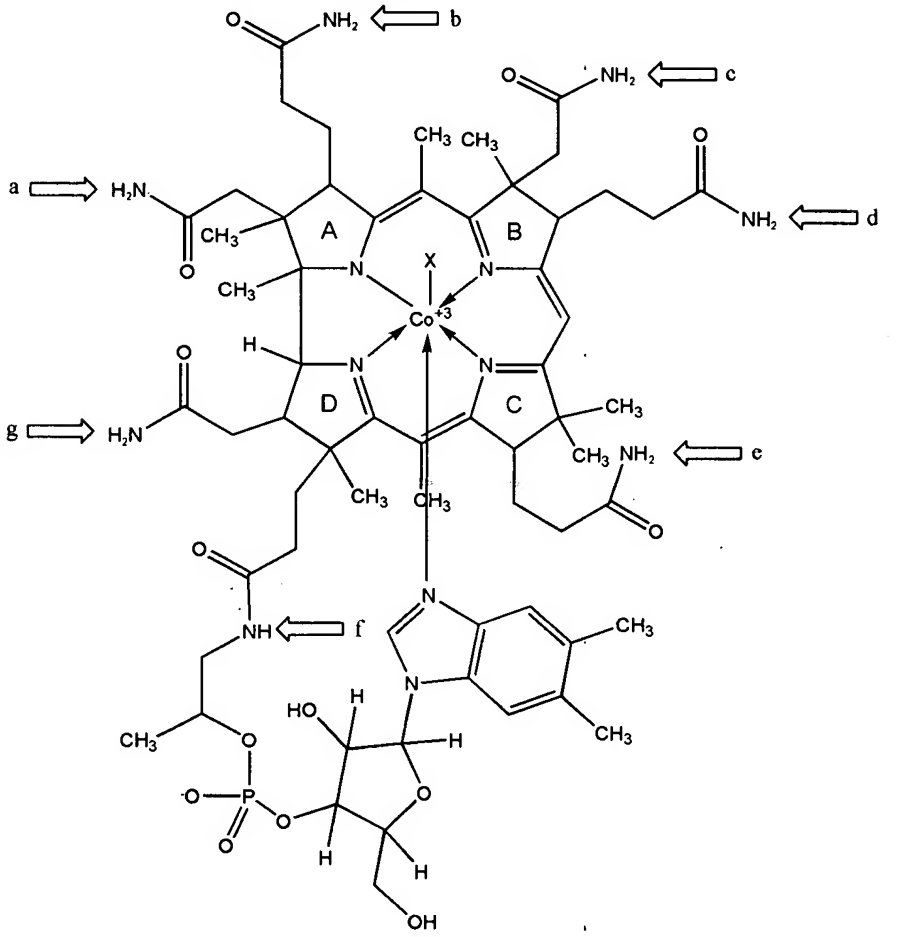
Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A compound wherein a residue of a compound of formula I:



formula I

is linked to one or more peptide residues or amino acid residues wherein: at least one of the peptide residues or the amino acid residues comprises one or more non-metallic radionuclides; and wherein X is CN, OH, CH_3 or adenosyl; or a pharmaceutically acceptable salt thereof; and

wherein a-g identify carboxamide positions in the compound.

2. – 3. (Cancelled).

4. (Original) The compound of claim 1 wherein at least one of the one or more non-metallic radionuclides is a diagnostic radionuclide.

5. (Original) The compound of claim 1 wherein the residue of a compound of formula I is linked to a peptide residue or an amino acid residue at the position of the b-carboxamide, d-carboxamide, e-carboxamide, or the 6-position of the compound of formula I.

6. (Original) The compound of claim 1 wherein the residue of the compound of formula I is linked to a peptide residue or an amino acid residue at the position of the b-carboxamide of the compound of formula I.

7. (Original) The compound of claim 1 wherein the residue of a compound of formula I is linked to a peptide residue or an amino acid residue at the d-carboxamide of the compound of formula I.

8. (Original) The compound of claim 1 wherein the residue of a compound of formula I is linked to a peptide residue or an amino acid residue at the e-carboxamide of the compound of formula I.

9. (Original) The compound of claim 1 wherein the residue of a compound of formula I is linked to a peptide residue or an amino acid residue at the 6-position of the compound of formula I.

10. (Original) The compound of claim 1 wherein at least one peptide residue comprises 2 to about 20 amino acids.

11. (Original) The compound of claim 10 wherein at least one peptide residue is a residue of poly-L-lysine.

12. – 19. (Cancelled).

20. (Original) The compound of claim 1 wherein at least one peptide residue comprises more than one non-metallic radionuclide.

21. (Original) The compound of claim 1 wherein at least one amino acid residue comprises more than one non-metallic radionuclide.

22. (Original) The compound of claim 1 wherein at least one peptide residue comprises 2 to about 4 non-metallic radionuclides.

23. (Original) The compound of claim 1 wherein at least one amino acid residue comprises 2 to about 4 non-metallic radionuclides.

24. (Original) The compound of claim 1 wherein each non-metallic radionuclide is independently Flourine-18, Bromine-76, or Iodine-123.

25. (Original) The compound of claim 1 wherein the residue of a compound of formula I is linked to two peptide residues, two amino acid residues, or a peptide residue and an amino acid residue wherein at least one of the peptide residues or at least one of the amino acid residues comprises one or more non-metallic radionuclides.

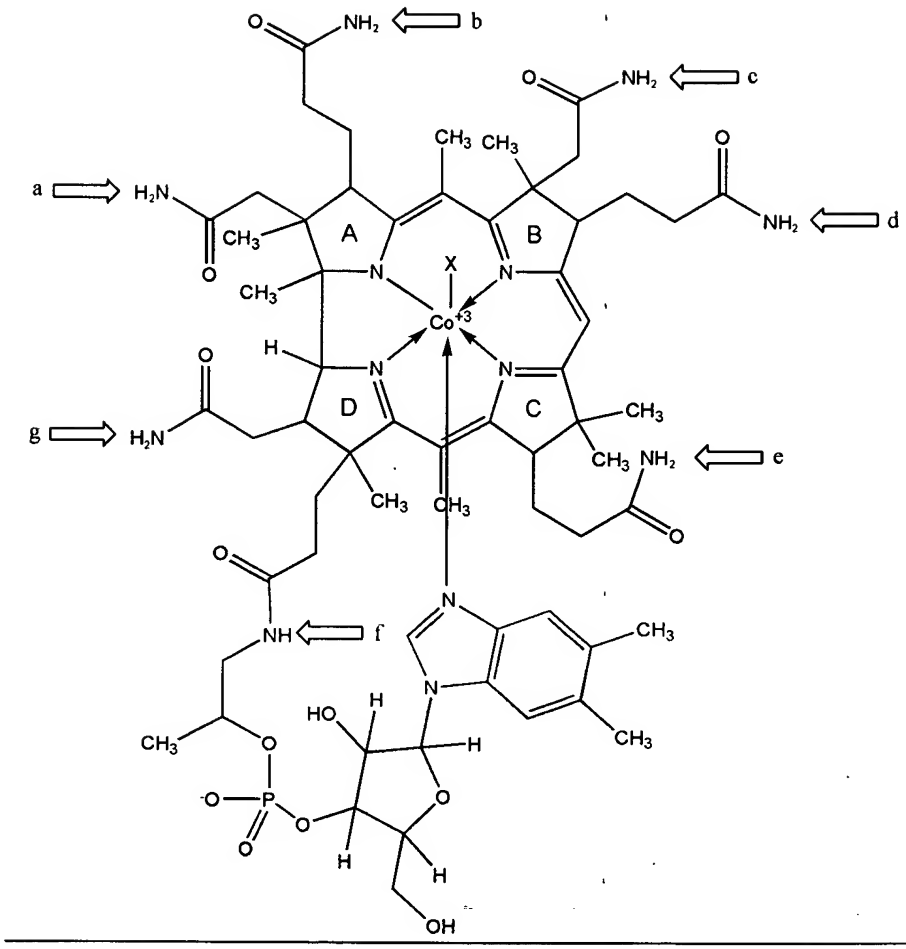
26. (Original) The compound of claim 1 wherein at least one peptide residue has the formula

wherein each M is independently a non-metallic radionuclide; each R is independently (C_1-C_{14})alkyl, (C_2-C_{14})alkenyl, (C_2-C_{14})alkynyl, (C_1-C_{14})alkoxy, hydroxy, cyano, nitro, halo, trifluoromethyl, N(R_a)(R_b), (C_1-C_{14})alkanoyl, (C_2-C_{14})alkanoyloxy, (C_6-C_{10})aryl, or (C_3-C_8)cycloalkyl wherein R_a and R_b are each independently H or (C_1-C_{14})alkyl; Q is H, (C_1-C_{14})alkyl, or a suitable amino protecting group; n is 2 to about 20; and wherein i is 1-5, j is 0-4 and i + j is ≤ 5.

27. (Original) The compound of claim 26 wherein each M is independently Fluorine-18, Bromine-76, or Iodine-123.

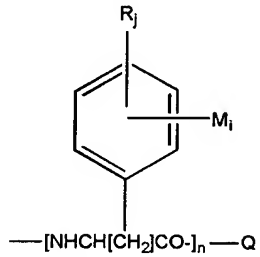
28. – 32. (Cancelled).

33. (Currently amended) A compound wherein a residue of a compound of formula I:



formula I

wherein X is CN, OH, CH_3 or adenosyl; or a pharmaceutically acceptable salt thereof; is linked to one or more residues of the formula



wherein each M is independently a non-metallic radionuclide; wherein each R is independently $(C_1\text{-}C_{14})$alkyl, $(C_2\text{-}C_{14})$alkenyl, $(C_2\text{-}C_{14})$alkynyl, $(C_1\text{-}C_{14})$alkoxy, hydroxy, cyano, nitro, halo, trifluoromethyl, $N(R_a)(R_b)$, $(C_1\text{-}C_{14})$alkanoyl, $(C_2\text{-}C_{14})$alkanoyloxy, $(C_6\text{-}C_{10})$aryl, or $(C_3\text{-}$

C_8)cycloalkyl wherein R_a and R_b are each independently H or (C_1-C_{14})alkyl; Q is H, (C_1-C_{14})alkyl, or a suitable amino protecting group; n is 2 to about 20; and wherein i is 1-5, j is 0-4 and i + j is $\leq$5; or a pharmaceutically acceptable salt thereof.

34. (Original) The compound of claim 33 wherein each M is Fluorine-18, Bromine-76, or Iodine-123.

35. (Original) The compound of claim 33 wherein i is 1.

36. (Original) The compound of claim 33 wherein j is 0.

37. (Original) The compound of claim 1 wherein the residue of a compound of formula I is further linked to one or more detectable radionuclides.

38. (Original) The compound of claim 37 wherein the detectable radionuclide is a non-metallic radionuclide.

39. (Original) The compound of claim 38 wherein the non-metallic radionuclide is Carbon-11, Fluorine-18, Bromine-76, Iodine-123, or Iodine-124.

40. (Original) The compound of claim 37 wherein the detectable radionuclide is directly linked to the compound of formula I.

41. (Original) The compound of claim 37 wherein the detectable radionuclide is linked by a linker to the compound of formula I.

42. (Original) The compound of claim 41 wherein the linker is of the formula W-A wherein A is (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_2-C_6)alkynyl, (C_3-C_8)cyclo-alkyl, or (C_6-C_{10})aryl, wherein

W is –N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -$S(O)_2$-, -N(R)-, -C(=O)-, or a direct bond; wherein each R is independently H or (C_1-C_6)alkyl; and wherein A is linked to one or more non-metallic radionuclides.

43. (Original) The compound of claim 41 wherein the linker is about 5 angstroms to about 50 angstroms, inclusive, in length.

44. (Original) The compound of claim 41 wherein the linker is linked to the 6-position of the compound of formula I or is linked to the residue of a-, b-, d- or e-carboxamide group of the compound of formula I.

45. – 46. (Cancelled).

47. (Previously presented) The compound of claim 1, wherein a residue of a compound of formula I is linked to a residue of a peptide comprising one or more non-metallic radionuclides; or a pharmaceutically acceptable salt thereof.

48. (Previously presented) The compound of claim 1, wherein a residue of a compound of formula I is linked to a residue of an amino acid comprising one or more non-metallic radionuclides; or a pharmaceutically acceptable salt thereof.

49. (Previously presented) The compound of claim 1, wherein a residue of a compound of formula I is linked to one or more non-metallic radionuclides; or a pharmaceutically acceptable salt thereof.

50. (Original) The compound of claim 49 wherein the non-metallic radionuclide is Carbon-11, Fluorine-18, Bromine-76, Iodine-123, or Iodine-124.

51. (Original) The compound of claim 49 wherein the detectable radionuclide is directly linked to the compound of formula I.

52. (Original) The compound of claim 49 wherein the detectable radionuclide is linked by a linker to the compound of formula I.

53. (Original) The compound of claim 52 wherein the linker is of the formula W-A wherein A is $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_2\text{-}C_6)$alkynyl, $(C_3\text{-}C_8)$cyclo-alkyl, or $(C_6\text{-}C_{10})$aryl, wherein W is –N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, $-S(O)_2$-, -N(R)-, -C(=O)-, or a direct bond; wherein each R is independently H or $(C_1\text{-}C_6)$alkyl; and wherein A is linked to one or more non-metallic radionuclides.

54. (Original) The compound of claim 52 wherein the linker is about 5 angstroms to about 50 angstroms, inclusive, in length.

55. (Original) The compound of claim 52 wherein the linker is linked to the 6-position of the compound of formula I or is linked to the residue of a-, b-, d- or e-carboxamide group of the compound of formula I.

56. (Previously presented) A pharmaceutical composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier.

57. (Previously presented) A method for imaging a tumor in mammalian tissue comprising administering to the mammal an amount of a compound of claim 1; and detecting said compound.

58. (Original) The method of claim 57 wherein the mammal is a human.

59. (Original) The method of claim 57 wherein the mammalian tissue is located in the breast, lung, thyroid, lymph node, genitourinary system, musculoskeletal system, gastrointestinal tract, central or peripheral nervous system, head, neck, or heart.

60. (Previously presented) A method for treating a tumor in a mammal comprising administering to the mammal an effective therapeutic amount of a compound of claim 1; wherein said compound comprises at least one therapeutic radionuclide.

61. (Original) The method of claim 60 wherein the mammal is a human.

62. (Original) The method of claim 60 wherein the mammalian tissue is located in the breast, lung, thyroid, lymph node, genitourinary system, musculoskeletal system, gastrointestinal tract, central or peripheral nervous system, head, neck, or heart.

63. – 69. (Cancelled).